REMARKS

Reconsideration and allowance of the subject application are respectfully requested.

Claims 1-6 and 10-25 are pending.

Section 101 Rejection

Claims 10-12, 15-18, 22 and 25 stand rejected under 35 U.S.C. §101 as being directed to a recording medium storing nonfunctional descriptive material. Applicants respectfully traverse this art grounds of rejection.

In response to applicants' arguments of March 1, 2007, the Examiner states on page 5 of the April 25, 2007 Final Office Action:

> As indicated in the previous rejection merely claiming nonfunctional descriptive material stored in a computer-readable medium does not make it statutory. See MPEP 2106.IV.B.1. Applicant's attention is directed to the fact that the claimed invention does not have any computer program stored in the computer readable medium which programs when read by the computer would allow the management data to perform the reproduction operation as indicated in the claimed invention.

First, while MPEP 2106.IV does include as Section B, there his not a Section B.1, so it unclear what portion of the MPEP the Examiner is exactly relying upon. The Examiner appears to be under the mistaken impression that only computer programs recorded on a computer readable medium constitute statutory subject matter. This is simply incorrect. MPEP § 2106.01 states the following.

> In this context, "function descriptive material" consists of **data structures** and computer programs which impart functionality

> when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited music, literary works and a compilation or mere arrangement of data.
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> (emphasis added)

Data structures recorded on a computer readable medium may constitute statutory subject matter.

MPEP § 2106.01 goes on further to state:

> Both types of "descriptive material" are nonstatutory when claimed as descriptive material *per se*, [In re Warmerdam,] 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare In re Lowry, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (discussing patentable weight of data structure limitations in the context of a statutory claim to a data structure stored on a computer readable medium that increases computer efficiency) and Warmerdam, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure *per se* held nonstatutory).

In view of the above, a more detailed discuss of In re Warmerdam and In re Lowry is warranted.

Discussion of In re Warmerdam

Claim 1 of In re Warmerdam recited:

> 1. A method for generating a data structure which represents the shape of [sic] physical object in a position and/or motion control machine as a hierarchy of bubbles, comprising the steps of:
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> first locating the medial axis of the object and
>
> then creating a hierarchy of bubbles on the medial axis.

Claim 6 of In re Warmerdam recited:

> 6. A data structure generated by the method of any of Claims 1 through 4.

With respect to claim 1, the court found both steps drawn strictly to mathematical equations, and therefore non-statutory abstract ideas. In re Warmerdam, at 1759. The court went on to find that the data structure of claim 6 suffers from the same defect.

Discussion of In re Lowry

Claim 1 of In re Lowry recited:

> 1. A memory for storing data for access by an application program being executed on a data processing system, comprising:
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> a data structure stored in said memory, said data structure including information resident in a database used by said application program and including:
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> a plurality of attribute data objects stored in said memory, each of

said attribute data objects containing different information from said database;

a single holder attribute data object for each of said attribute data objects, each of said holder attribute data objects being one of said plurality of attribute data objects, a being-held relationship existing between each attribute data object and its holder attribute data object, and each of said attribute data objects having a being-held relationship with only a single other attribute data object, thereby establishing a hierarchy of said plurality of attribute data objects;

a referent attribute data object for at least one of said attribute data objects, said referent attribute data object being nonhierarchically related to a holder attribute data object for the same at least one of said attribute data objects and also being one of said plurality of attribute data objects, attribute data objects for which there exist only holder attribute data objects being called element data objects, and attribute data objects for which there also exist referent attribute data objects being called relation data objects; and

an apex data object stored in said memory and having no being-held relationship with any of said attribute data objects, however, at least one of said attribute data objects having a being-held relationship with said apex data object.

In finding that the printed matter cases have no factual relevance to the claims at issue in In re Lowry, the court stated:

> Nor are the data structures analogous to printed matter. Lowry's ADOs do not represent merely underlying data in a database. ADOs contain both information used by application programs and information regarding their physical interrelationships within a memory. Lowry's claims dictate how application programs manage information. Thus, Lowry's claims define functional characteristics of the memory.
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> In re Lowry, at 1034.

The court further noted:

> Indeed, Lowry does not seek to patent the Attributive data model in

> the abstract. Nor does he seek to patent the content of information resident in a database. Rather, Lowry's data structures impose a physical organization on the data.
>
> In re Lowry, at 1034.

And, on the issue of abstract ideas, the Federal Circuit in In re Lowry noted:

> More than mere abstraction, the data structures are specific electrical or magnetic structural elements in a memory. According to Lowry, the data structures provide tangible benefits: data stored in accordance with the claimed data structures are more easily accessed, stored, and erased. Lowry further notes that, unlike prior art data structures, Lowry's data structures simultaneously represent complex data accurately and enable powerful nested operations. In short, Lowry's data structures are physical entities that provide increased efficiency in computer operation.
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> In re Lowry, at 1035.

The claims at issue (e.g., claim 10) are analogous to the claims in In re Lowry, and as such are clearly statutory subject matter. Unlike the claims of In re Warmerdam, the claims of the subject application do not recite mathematical equations, or the generation of data structures using mathematical equations. Instead, as in In re Lowry, claim 10 recites a computer readable medium storing a specific data structure that dictates how application programs reproduce data. Accordingly, because the computer readable medium recited in claim 10 includes a data structure having a data area and a management area, which provides management data for managing

reproduction of data in the data area of the computer readable medium, claim 10 is clearly directed towards patentable, statutory subject matter.

In the language of MPEP §2106.01 regarding ***functional*** descriptive material, claim 10 is directed to "a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory." In light of the above, Applicants respectfully request that the rejection of independent claim 10, and claims depending therefrom, under 35 U.S.C. § 101 be withdrawn.[1]

Applicants further submit that the above argument equally apply to new claims 15-18 and 25.

Applicants are at a loss as to why claim 22 has been included in this rejection, and suspect that this is just an error.

Art Grounds of Rejection

Claims 1-6 stand rejected under 35 U.S.C. §102(e) as being anticipated by Mishima (U.S. Publication No. 2002/0090207). Applicants respectfully traverse this art grounds of rejection.

In rebutting applicants' previous arguments, the Examiner states on page 6 of the April 25, 2007 Final Office Action:

[1] The Examiner may also find it helpful to review AT&T Corp. v. Excel Communications Inc., 50 USPQ2d 1447 (Fed. Cir. 1999).

> It is noted that, contrary to Applicant's argument, the Mishima et al's reference in page 8, paragraph [0073], lines 9-13, only indicates that during the special playback time, the I and the P pictures are read from the recording medium to synthesize the picture of one screen portion and is outputted as a playback picture. It is noted that the reference does not indicate creating a high-speed moving picture as argued by Applicant.
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> (emphasis in the original).

As the Examiner notes in the above-quoted passage, Mishima teaches the following in paragraph [0073]:

> At the time of the special playback, only the data of the I picture and the P picture are read in the unit of area, and regions of areas 1, 2, - - - , n are read from continuous n I pictures and P pictures to synthesize a picture of one screen portion and is outputted as a playback picture.

Furthermore, the disclosure in paragraphs [0061] – [0067] makes clear that the "special playback" is a form of high speed playback. Namely, Mishima teaches synthesizing one screen during special playback from I and P pictures. Mishima discloses nothing with respect to still pictures, and the Examiner has not shown that Mishima discloses or suggests reproduction of a still picture. As such, Mishima fails to anticipate or render claim 1 obvious to one skilled in the art.

Claims 2-3, dependent on claim 1, and are patentable at least for the reasons stated above with respect to claim 1. Independent claim 4 includes similar limitations to those discussed above with respect to claim 1, and is patentable at least for the reasons discussed above with respect to claim 1.

Claims 5-6, dependent on claim 4, are patentable at least for the reasons stated above with respect to claim 4.

Claims 10-25 stands rejected under 35 U.S.C. §103 as being unpatentable over Juri (U.S. Patent No. 5,999,693) in view of Official Notice. Applicants respectfully traverse this art grounds of rejection.

On page 4 of the April 25, 2007 Final Office Action, the Examiner notes that Juri does not disclose or suggest "a management area, separated from the data area and not included in a header for the video data in the data area, storing management data for managing reproduction of the video data, the management data indicating if the video data does not include a still picture" as recited in claim 10.

The Examiner, however, takes Official Notice that:

> it is notoriously well known in the video recording/reproducing art to have a recording medium having video data recorded in the a data area and wherein management information is recorded in a table of content (TOC) area that is separated from the data area on the recording medium, for example, the TOC could be located in the inner most track area of the recording medium, as specified in the present claims 10, and 13-14.
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> Page 4 of the April 25, 2007 Final Office Action.

The Examiner goes on to allege that:

> It would have been obvious to one skilled in the art to modify the Juri et al's recording/reproducing apparatus wherein the recording medium provided thereof would incorporate the capability of having video data recorded in a data area and wherein management information is recorded in a table of content (TOC) area that is separated from the data area on the recording medium, in the same conventional manner as is

well known in the video recording art. Examiner has taken Official Notice. The motivation is to improve speed of accessing data on the recording medium as suggested in the prior art.

Page 4 of the April 25, 2007 Final Office Action.

The Examiner's allegations are flawed on several counts. While Applicants do not dispute that a list of titles known as a table of contents exists, the Examiner has failed to show that such tables include the type of management information claimed or the type of management information taught in Juri. Accordingly, Applicants challenge the Examiner to produce a prior art reference that supports his Official Notice of a table of contents consistent with his allegations.

Stated another way, there is no nexus between a list of titles on a recording medium (i.e., a table of contents) and "the management data including information for managing reproduction of the video data, and the management data indicating if the video data does not include a still picture," as recited in claim 10. As such, there is no plausible explanation why a list of titles would have been modified to include such information.

Furthermore, the Examiner states "improve speed of accessing data on the recording medium as suggested in the prior art" as motivation. To what prior art is the Examiner referring? No art has been cited to support the teaching of a TOC. This leads Applicants' to believe that the Examiner is referring to Juri. However, Juri teaches that the still image flag is part of the first video auxiliary data that is connected to the main video data. Namely, the still image flag is part of a header for the main video data. Juri teaches this

structure for increasing access speed. Accordingly, Applicants respectfully request that the Examiner withdraw this art grounds of rejection.

Claims 11-12, dependent on claim 10, and are patentable at least for the reasons stated above with respect to claim 10. Independent claims 13-14 and 23, include similar limitations to some of those discussed above with respect to claim 10, and are patentable at least for the reasons discussed above with respect to those limitations of claim 10.

For the reasons set forth above, Juri also fails to disclose or suggest "a management area, separated from the data area and not directly adjacent to the data area, storing management data for managing reproduction of the video data, the management data indicating if the video data does not include a still picture" as recited in new independent claim 15.

Claims 16-18, dependent on claim 15, and are patentable at least for the reasons stated above with respect to claim 15. Independent claims 19, 21 and 24-25 include similar limitations to some of those discussed above with respect to claim 15, and are patentable at least for the reasons discussed above with respect to those limitations of claim 15. Claims 20 and 22, dependent on one of claims 19 and 21, are patentable at least for the reasons stated above with respect to claims 19 and 21.

CONCLUSION

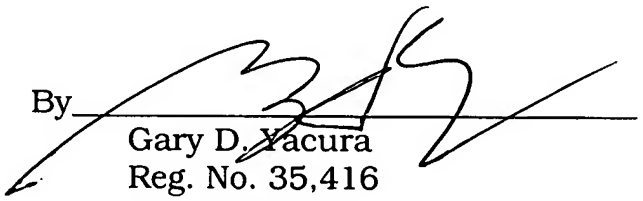
In view of above remarks, reconsideration of the outstanding rejections and allowance of the pending claims is respectfully requested.

If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at number listed below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

HARNESS, DICKEY & PIERCE, PLC

By 

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